Book Review / Journal of Evolutionary Economics

Mario Morroni (2006) Knowledge, Scale and Transactions in the Theory of the Firm.
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Is theoretical diversity beneficial to scientific progress? One could be tempted to answer immediately yes, since theoretical diversity means the elaboration of alternative assumptions, whose related results can be confronted, and further validated or refuted. Theoretical diversity is thus generally considered as a basic condition for scientific progress. In the meantime, one could also advocate that the conflict between alternative theories can be so intense that even the object of study may be captured in radically different ways, leading to poor confrontation, validation and refutation processes. In that case, the fragmented view that results is not necessarily beneficial to scientific advances. A medium way of putting these arguments together, and trying to reconcile the two former opposite points of views, is to consider that, in a phase of emergence of a specific field of research, abundance in theoretical arguments, and even antagonism, is desirable; in a phase of maturity, however, coordination between various approaches is preferable.

Mario Morroni addresses these kinds of questions in his recent book, focusing on a specific field of research: the theory of the firm. In a nutshell, he argues that it is now high time to think about an integrated framework for the theory of the firm. It is noteworthy that Mario Morroni's purpose in this book is not to provide a survey of the fast growing literature on the theory of the firm. Rather, this essay is intended to pursue the avenue of research started with his previous book Production Process and Technical Change (Morroni, 1992), that consisted in moving from the analysis of temporal, organizational and qualitative dimension of production toward a new analytical framework based on a cognitive perspective that also encompasses transactions and scale/scope considerations. The original idea in the new book is to overcome the conflicts between capabilities, transaction costs and scale/scope approaches that could have been beneficial to the theory of the firm in its early phases of development. Now that the theory of the firm has reached a sufficient degree of maturity, the only way to stimulate scientific knowledge is, from Mario Morroni's point of view, to consider explicitly the possible complementarities between these approaches.

The central question addressed in the book is thus the elaboration of a common ground for an integrated framework in the domain of the theory of the firm. The solution suggested by Mario Morroni is to analyse the interplay that takes place between capabilities, transactions and scale/scope aspects in moulding the individual firm's performance and growth. Morroni shows that this interplay is even greater when learning processes, complementarity and uncertainty matter. The structure of the book is very coherent with the problematic analysed. The author first clarifies the central question in a simple setting, showing that firm's performance and growth effectively necessitate the combination of different approaches of the firm, and not the exclusion of one by the other. Then in a more complex setting, the author analyses how uncertainty, complementarity and learning processes reinforce the connection between capabilities, transactions and scale/scope approaches, and what is the impact on the performance and the growth of the firm. The contribution is essentially theoretical, and combines several seminal contributions on the theme, such as Coase (1937) and Penrose (1959), but also Chandler (1962, 1977, 1990), Loasby (1999), Langlois and Foss (1999), Langlois and Robertson (1995), Nelson and Winter (1982), and Georgescu-Roegen (1969).

In the introductory chapter, Mario Morroni decomposes the central question into a "causal chain". The causal chain relates (i) basic conditions, i.e. the characteristics of information and knowledge, the characteristics of techniques and equipment, the individual motivations and aims, the individual abilities, uncertainty, structural change, institutional and market conditions; (ii) decision making, including property structures, control rights, aims of the firm, incentives and rationality; and (iii) organisational coordination, essentially capabilities, transactions and scale/scope issues. The interaction between these different conceptual blocks have an impact on the competitiveness of the firm, namely on its efficiency (in terms of input requirements) and efficacy (in terms of matching current and potential market needs), and furthermore on the growth of the firm. The author advocates that with weak uncertainty, costly knowledge and perfectly rational agents, the interaction among capabilities, transactions and scale/scope considerations may be significant. But, the interaction described from the causal chain is significantly reinforced in the presence of cognitive limitations that prevent individuals from computing all possible pay-offs of their actions, thus obliging them to operate under radical uncertainty. The outcome is that, for the author, as soon as we look for a comprehensive theory, we need to consider both situations of radical uncertainty and farsightedness.

This introductory chapter thus poses the basic elements of the author's reasoning, and the key definitions that structure the different chapters of the book.

Chapter 1 characterises the role of the "basic conditions". These basic conditions influence the firm's decision making in two ways. Basic conditions defined as "external" create an objective set of opportunities and constraints for the firm. But, in the meantime, decision making mechanisms are shaped according to the subjective "image" of the environmental conditions that entrepreneurs and managers have developed in their mind. Consequently, basic conditions influence decision making, organisational setting and competitiveness, but there are important feedbacks to consider on how basic conditions are themselves affected by changes in the domain of decision, organisation, and performance. Here, the author provides an interesting discussion on how the transfer of information (and potentially the non transferability of tacit knowledge), and the characteristics of production processes shape these influences and feedbacks. He analyses especially how production processes that are characterized by indivisibility, non saturability, and complementarity play a role in shaping organisational settings, in four different contexts of uncertainty (complete forecasting, incomplete forecasting, incomplete theoretical framework and incomplete information-processing abilities).

Chapter 2 clarifies what the author intends by processes of "decision making". Decision making is the outcome of a complex combination between property structure, power and control, the aims of the firm and the relationships between shareholder, manager and stakeholder. The author also considers the incentives and motivations schemes implemented, and the degree of rationality of the different actors involved. Here the author's contribution is to provide an analysis of this complex combination in a context of perfect rationality, cognitive rationality, and multiple rationalities.

Chapter 3 deals with "organisational coordination". Here, the issue is to develop the integrated framework that links directly the three approaches to the firm, i.e. capabilities, transactions and scale/scope. To do so, the author examines different situations: (i) there is no significant weight of these three aspects, and therefore no interaction among them, leading to an organisational coordination oriented towards full decentralisation; (ii) there is no interaction among the three aspects because one aspect clearly dominates – here a tendency toward vertical integration or cooperation is likely to appear; (iii) there is a significant weight of all three and interaction among them, involving a tendency towards vertical integration through unified ownership or forms of collaborations within and among firms ; (iv) there is significant weight of all three and intense interaction among them, generating a strong tendency towards an expansion of the boundaries of organisational coordination within and among firms.

Chapter 4 goes back again on the central issue of uncertainty, with new results. The author argues that uncertainty may be tempered in different contexts. Within markets, for instance, when autonomous parties are in presence, there may be some special contracts implying screening, signalling, monitoring, and incentives that act as reductors of uncertainty. Within firms, also, one should think about organisational devices that ensure information, enforcement, regulation and dispute resolution activities. Finally between firms, the virtue of hybrids or networks of firms is to decrease uncertainty.

Chapter 5 investigates the last two points. Firms, by keeping reserves and by designing long term relational agreements, may be apt to manage appropriately situations of high uncertainty. In addition, employment relationships, division of labour and learning processes contribute to limit uncertainty.

A conclusive chapter draws some new lines on the growth of the firm as the interplay between the three aspects of organisational coordination. Here the author identifies the potential advantages that are derived from the cross-linked effects between the development of capabilities, arrangement of transactions and design of the operational scale.

Summing up, Mario Morroni develops a convincing view on the necessity to move towards an integrated framework on the theory of the firm, including capabilities, transactions and scale/scope issues. The book is thus an interesting read for experts in the theory of the firm who might either be looking for a progressive definition of common assumptions, or at least willing to know more about how such a progressive definition might be generated. One of the key values of the book lies certainly on how the author, first, decomposes the mechanisms that justify the emergence of the firm and its changing boundaries in different frameworks and, second, articulates these distinct mechanisms within an integrated framework. The book provides a rich background on the theory of the firm, making it valuable to Master and Phd students as well.

It certainly is also an interesting base for empirical work, as it provides a lot of key assumptions to test, and a lot of significant issues to solve. I can see at least two important fields of investigation that could be potentially important to sustain Mario Morroni's argument. The first one is how the growth of the firm can be considered empirically as a reliable indicator of its performance. This is a key element in Mario Morroni's causal chain, but still needs to be tested. The second one is that, though the literature provides extensive studies on particular kinds of firms (for instance, start ups versus large firms), Mario Morroni argues that it is possible to build a theoretical framework designed to describe and understand the "multifarious and changing nature of the firm". This also is an important element that would need some further empirical evidence.

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Jackie Krafft, GREDEG, University of Nice Sophia Antipolis, CNRS, France
(e-mail:Jackie.Krafft@gredeg.cnrs.fr)